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ABSTRACT

Many of the references in this bibliography are followed by a listing of ERIC descriptors to indicate the contents. The items are grouped into six sections: (1) learning and the learning environment; (2) classroom environment; (3) school and educational environments; (4) environmental influences upon learning and education; color, thermal environment, lighting and visual environment, acoustical environment; (5) controlled and physical environments; and (6) miscellaneous. (MLF)

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EFFECTS OF FACILITIES  
ON EDUCATIONAL ACHIEVEMENT

A Selected Bibliography  
May 1970

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EFFECTS OF FACILITIES  
ON EDUCATIONAL ACHIEVEMENT

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ERIC CLEARINGHOUSE ON EDUCATIONAL FACILITIES  
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## I N T R O D U C T I O N

Information contained in this selected bibliography concerning the "learning environment" was indexed on the basis of accessibility to current materials. Citations were selected on the basis of pertinence of information to environmental and behavioral influences and affects, current publishing dates, manner of presentations, and quality of information.

All documents were selected with the conviction that total planning and design for the educational environment is a must if we want to optimize our learning potentials. An optimum total environment requires both an understanding of human needs by each design discipline and an understanding of the contributions which can be made by designers from related fields. This bibliography has interdisciplinary goals to increase the awareness and understanding of the elements of the physical environment which affect our learning.

Alphabetically arranged references/sources, both indexed (with descriptors), and not indexed (without descriptors), are included in this bibliography. Source and document descriptors have been included in cases when documents were reviewed to help facilitate users grasp of the particular references emphasis and direction. References were selected on the basis of potential usefulness and strength of relationship to contemporary thought and practice. Documents not indexed are not necessarily less valid than those indexed.

but were unobtainable to the bibliographer during the period of his search. These references that are not indexed have been included for their potential applicability.

Each indexed reference source identified is followed by an alphabetical listing of descriptors which were selected to describe the subject elements of each document. Major descriptors are the most important descriptors assigned to a given document and are identified by an asterisk. The descriptors used throughout this bibliography are part of the Thesaurus of ERIC Descriptors, which is used for indexing, storing, and retrieving documents handled by the ERIC system.

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## LEARNING AND LEARNING ENVIRONMENTS

This section is particularly concerned with environmental influences upon learning and how it pertains to the performance of the student, teacher and the facility.



Adler, Alfred. The Education of Children. New York: Greenburg Publishing, 1930. 309 pp.

Bancroft, J. H. Posture of School Children. New York: MacMillan Company, 1919. 327 pp.

Davies, Evelyn A. The Elementary School Child and His Posture Patterns. New York: Appleton-Century-Crofts, Inc., 1958.

Designing an Environment for Learning. Proceedings of a Conference of Educational Survey Directors of Member Universities of the Committee on Institutional Cooperation, (Madison, Wisconsin, April 27-28, 1967). Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-\$0.25, HC-\$1.30, ED 025 930. 1967. 24 pp.

\*Design Needs; \*Educational Environment; \*Educational Planning; \*Environmental Criteria; \*Learning; Controlled Environment; Data Processing; Educational Problems; Environmental Influences; Learning Activities; Learning Difficulties; Physical Environment; School Planning

Facility Technology Catalyst for Learning. Columbus, Ohio: C.E.E.P. Headquarters, 29 West Woodruff Ave., and/or Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-\$0.25, HC-\$2.80, ED 029 470. 1968. 54 pp.

\*Educational Facilities; \*Educational Planning; \*Instructional Technology; \*Learning; \*Technology; Audiovisual Aids; Audiovisual Instruction; Community Colleges; Education; Educational Television; Higher Education; Media Technology; Planning

Gores, H. B. Flexibility of the School Plant and Effective Learning. East Lansing, Mich.: National Council on Schoolhouse Construction, 1962.

Green, Alan C. Environment for Learning--The 1970's. Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-\$0.25, HC-\$1.10, ED 029 461. 1969. 20 pp.



\*Architectural Programing; \*Educational Environment;  
\*Educational Innovation; \*Learning; Classroom Design;  
Furniture Design; Instructional Aids; Large Group  
Instruction; Schedule Modules; School Improvement;  
Special Education; Vocational Education

Hall, J. C. "The Effects of Background Music on Reading  
Comprehension," Journal of Educational Research, 45  
(1952), 451-458.

Harmon, Darell B. "Vision, Lighting, and Learning,"  
School Planning, 1 (Sept. 1956), 6-18.

Koppes, W. F. Design Criteria for Learning Spaces.  
Seating - Lighting - Acoustics. Troy, New York:  
Rensselaer Polytechnic Institute, School of Archi-  
tecture, and/or Bethesda, Maryland: ERIC Document  
Reproduction Service, National Cash Register Com-  
pany, MF-\$0.25, HC-\$2.70, ED 025 931. 1962. 52 pp.

\*Acoustics; \*Design; \*Furniture Design; \*Learning;  
\*Lighting; Audiovisual Aids; Classroom Design;  
Controlled Environment; Criteria; Design Needs;  
Educational Environment; Environmental Criteria;  
Environmental Influences; Equipment; Instructional  
Design

Lane, W. R. Thermal Environment and Learning. Iowa City,  
Iowa: Iowa University, Iowa Center for Research in  
School, and/or Bethesda, Maryland: ERIC Document  
Reproduction Service, National Cash Register Company,  
MF-\$0.25, HC-\$0.60. 1966. 10 pp.

\*Classroom Design; \*Environmental Research; \*Facility  
Case Studies; \*Learning; \*Thermal Environment; Glass  
Walls; School Environment

The Learning Environment. New York: American Electric  
Power System, 1968. 24 pp.

The Learning Environment. Salina, Kansas: Shaver and Company,  
and/or Bethesda, Maryland: ERIC Document Reproduction  
Service, National Cash Register Comapny, MF-\$0.25,  
HC-\$0.55, ED 021 434. 1968. 9 pp.

\*Environmental Influences; \*Facility Guidelines;  
\*Learning; \*School Design; \*School Environment;  
Acoustics; Lighting; Thermal Environment

Loeffler, M. H. The Prepared Environment and Its Relationship to Learning. Oklahoma City, Okla.: Trustees of Casady School, and/or Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-\$0.25, HC-\$1.65, ED 028 624. 1968. 31 pp.

\*Design Needs; \*Early Childhood Education; \*Educational Equipment; \*Learning; \*School Environment; Carrels; Classroom Design; Furniture Design; Individual Needs; Playgrounds; Play Therapy; School Design

Myrick, Richard; and B. S. Marx. An Exploratory Study of the Relationship Between High School Building Design and Student Learning. Final Report. Washington, D.C.: George Washington University, 1968. 103 pp.

Schaefer, K.E. Environmental Effects on Consciousness. (International Symposium on Submarine and Space Medicine). New York: Mac Millan Book Company, 1962. 146 pp.

School Planning Laboratory. A Study of Studying. Stanford, Calif.: Stanford University.

Seagers, Paul W. Light, Vision, and Learning. New York: Better Light, Better Sight Bureau, 1963. 95 pp.

Shaw, Leland G. "Perceptual Aspects of the Learning Space," Building Research, 6 (July/Aug. 1969).

\*Classroom Design; \*Educational Environment; \*Educational Psychology; \*Educational Research; \*Perception; Design Needs; Environmental Influences; Learning Experience; Learning Processes; Space Orientation

Singel, Raymond J. Planning the Learning Environment. Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-\$0.25, HC-\$1.55, EF 004 121. 1969. 28 pp.

\*Classroom Environment; \*Educational Needs; \*Environmental Influences; \*Learning; \*Students; Acoustics; Bibliographic Citations; Classroom Design; Controlled Environment; Educational Facilities; Educational Improvement; Environmental Criteria; Human Engineering; Interior Space; Lighting; Physical Design Needs; Planning; School Design

Thorndike, E. E.; and W. A. McCall. Ventilation in Relation to Mental Work. New York: Colombia University, New York Teachers College, 1916. 83 pp.

Waropay, V. M. Choosing the Right Environment. A Study in School Design. Chicago, Ill.: United States Gypsum Company, 101 South Wacker Dr., 1967. 13 pp.

\*Criteria; \*Environmental Influence; \*Learning; \*School Design; \*School Environment; Acoustical Environment; Audiovisual Aids; Ceilings; Chalkboards; Component Building Systems; Maintenance; Safety

Winant, Rooskandar. Environmental Control in School Buildings Through Planting. Bangkok (Thailand): UNESCO Regional Office for Education in Asia, P. O. Box 1425, 1964. 20 pp.

\*Classroom Environment; \*Controlled Environment; \*Landscaping; \*Planting; \*School Building; Acoustical Environment; Maintenance; Physical Design Needs; Trees; Ventilation; Visual Environment

### CLASSROOM ENVIRONMENT

This section is concerned in particular with classroom design and how its physical components, elements and variables affect the entire efficiency and performance of the user within his environment.

Bernardis, Amo. "Two Views on the Carrell Question -- To Build or to Buy," Educational Product Report, 2 (Nov. 1968), 14-17.

\*Carrels; \*Classroom Environment; \*Environmental Criteria; \*Equipment Manufacturers; \*Study Facilities; Acoustic Barriers; Acoustics; Behavior Patterns; Classroom Furniture; Design Needs; Educational Finance; Interior Space; Lighting; Thermal Environment; Visual Environment

Collins, G. J.; and W. L. Stormer. Condition of Public School Plants 1964-1965. Washington, D.C.: Superintendent of Documents, U. S. Government Printing Office, and/or Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-\$0.25, EF 000 274. 1965. 42 pp.

\*Classroom Environment; \*Classrooms; \*Facilities Evaluation; \*National Surveys; \*School Surveys; Educational Facilities; Fire Safety; Heating; Illumination; Safety; Thermal Environment; Visual Environment

Education, Children and Comfort. Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-\$0.25, HC-\$0.50, ED 020 644. 1965. 8 pp.

\*Classroom Environment; \*Experimental Schools; \*Learning; \*Thermal Environment; Air Conditioning; Controlled Environment; Heating; Ventilation

Foote, F.M. "Classrooms for Partially Seeing Children," Exceptional Child, (May 1956), 4 pp.

Goodman, F. L. "Experimenting With Carrels: The Simple Approach," Educational Product Report, 2 (Nov. 1968), 18-19.

\*Carrels; \*Case Studies; \*Classroom Environment; \*Movable Partitions; \*Social Factors; Classrooms; Curricular Development; Environmental Influences; Environmental Research; Visual Environment; Visual Stimuli

Harmon, Darell B. The Coordinated Classroom. Unpublished Lecture Notes, Lecture # 11. Austin, Texas.

Harmon, Darell B. The Coordinated Classroom. Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-\$0.25, HC-\$2.16, ED 020 621. 1951. 52 pp.

\*Design; \*Environment; \*Furniture; \*Lighting; Building Design; Classroom Design; Classroom Environment; Classroom Furniture; Educational Equipment; Furniture Design; School Design

Harmon, Darell B. "The School of Tomorrow," The Nation's Schools, 51 (Jan. 1953), 79-81.

\*Classroom Design; \*Educational Environment; \*Environmental Influences; \*Physiology; \*Psychological Design Needs; Air Conditioning; Architectural Design; Contrast; Curriculum; Equipment Design; Furniture; Glare; Illumination Levels; Visual Perception

Hauf, H. D. New Spaces for Learning: Designing College Facilities to Utilize Instructional Aides and Media. Troy, New York: Rensselaer Polytechnic Institute, School of Architecture, 1961. 185 pp.

\*Classroom Design; \*Classroom Furniture; \*College Buildings; \*Facility Case Studies; \*Facility Guidelines; Acoustical Environment; Educational Environment; Educational Equipment; Environmental Criteria; Visual Environment

Kephart, N. C.; and William Floyd. "Classroom Environment," The Journal of Educational Psychology, 45 (1954).

Kyzar, B. A Comparison of Instructional Practices in Classrooms of Different Designs. Austin, Texas: University of Texas, 1962.

Martin, D. J. "Designing the Interpretive Classroom," College and University Business, 45 (Nov. 1968), 67-70.



Modern School Planning. Ann Arbor, Mich.: Prakken Publications, 416 Longshore Dr., 1967. 256 pp.

\*Classroom Environment; \*Educational Planning; \*Environmental Influences; \*Facility Guidelines; \*Industrial Arts; Color; Educational Programs; Equipment; Graphic Arts; Heating; Performance Criteria; Purchasing; Safety; School Shops; Standards

Perkins, L. B. Work Place for Learning. Toledo, Ohio: Libby Owens Ford Foundation, Toledo Trust Company, 245 Summit St., 1957. 70 pp.

\*Architecture; \*Classroom Environment; \*School Architecture; \*School Design; Auditoriums; Educational Facilities; Gymnasiums; Visual Environment

Propp, G. Designing Instructional Facilities for Teaching the Deaf: The Learning Module Symposium on Research and Utilization of Educational Media for Teaching the Deaf. Lincoln, Nebraska: Nebraska Center for Continuing Education, and/or Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-\$0.75, HC-\$7.60, ED 026 792. 1968. 150 pp.

\*Classroom Design; \*Classroom Environment; \*Deaf Education; \*Educational Facilities; \*Instructional Materials; Acoustical Environment; Classroom Furniture; Controlled Environment; Environmental Influences; Equipment; Lighting

Rath, G. J. "Carrels and the Disadvantaged Child," Educational Product Report, 2 (Nov. 1968), 20-21.

\*Carrels; \*Culturally Disadvantaged; \*Educational Facilities; \*Educational Programs; \*Equipment; Behavior Patterns; Classroom Environment; Controlled Environment; Design; Educational Environment; Elementary Education; Human Engineering; Learning; Learning Process

Turner, A. S.; and A. A. Brainerd. "Classroom Fields of Vision," Illuminating Engineering, 42 (1947), 488-502.



Willard, Allphin. "Arranging the Classroom for T.V.  
Viewing," Sylvania Lighting Products Engineering  
Bulletin, 4 pp.

### SCHOOL AND EDUCATIONAL ENVIRONMENTS

The physical and environmental design needs of the school and its educational facilities are reviewed in this section with emphasis on the proper planning and design of environments for learning.

Bertram, Berensen. "The Planned Environment: An Educational Tool," International Journal of Educational Science, 2 (1968), 123-125.

\*Classroom Environment; \*Educational Environment; \*Environmental Influences; \*Learning; Behavior; Criteria; Design Needs; Human Engineering; Physical Environment; Psychophysiology; Task Performance

Boyd, R. A. "Light: Its Effect on Teaching and Learning," School Shop (April 1963), 39-40.

\*Design Needs; \*Educational Environment; \*Illumination Levels; \*Lighting Design; \*Visual Environment; Contrast; Glare; Lighting; Task Performance; Teaching; Visual Acuity

Buildings for Education. Colombo, Ceylon: Asian Regional Institute for School Building Research, 1968. 36 pp.

\*Abstracts; \*Environmental Research; \*School Buildings; \*School Construction; \*School Environment; Air Conditioning; Building Materials; Component Building Systems; Human Engineering; Lighting; Public Health; Thermal Environment; Ventilation

Campbell, S. C. The Relationship Between the Comprehensiveness of School Plant Planning Procedures and the Quality of Resultant School Plants. Madison, Wisc.: University of Wisconsin, 1961.

A Check List for a Healthful and Safe School Environment. Sacramento, Calif.: California State Department of Education, September 1957.

Davis, J. C.; and R. McQueens. Planning Requirements for Small School Facilities. Las Cruces, New México: ERIC Clearinghouse on Rural Education and Small Schools, Box A P, University Park Branch, New Mexico State University, 1969. 25 pp.

\*Facility Requirements; \*School Design; \*School Environment; \*School Planning; \*Small Schools; Architectural Elements; Bibliographies; Educational Specifications; School Libraries; Space Utilization

Dober, R. P. The New Campus in Britain--Ideas of Consequence for the United States. New York: Educational Facilities Laboratories, Inc., 477 Madison Ave., and/or Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-\$0.50, HC-\$3.85, ED 031 065. 1965. 75 pp.

\*Building Design; \*Campus Planning; \*College Planning; \*Educational Environment; \*Master Plans; Educational Facilities; Institutional Equipment; Student Enrollment

Educational Facilities Laboratories, Inc. Schools Without Walls. New York: Educational Facilities Laboratories, Inc., 477 Madison Ave., 1965.

The Effect of Windowless Classrooms on Elementary School Children. Ann Arbor, Mich.: Michigan University, Architecture Research Laboratory, Department of Architecture, 1965. 103 pp.

\*Environment; \*Environmental Influences; \*Lighting; \*School Design; \*School Environment; Classroom Environment

Elementary School Buildings -- Design for Learning. Washington, D.C.: National Education Association, Department of Elementary School Principals, 1959. 200 pp.

Environmental Engineering for the School. Washington, D.C.: U.S. Public Health Service, Division of Environmental and Food Protection, 1961. 74 pp.

Gores, H. B. "Facilities for the Future," Liberal Education, 49 (March 1963), 34-47.

\*College Planning; \*Flexible Facilities; \*Physical Environment; \*Science Facilities; \*Space Utilization; College Housing; Libraries

A Guide for Better School Environment and Health. Columbus, Ohio: Ohio Department of Health, 1948.

A Guide to Healthful School Environment. Bismarck, North Dakota: North Dakota State Department of Health, Health Education.

A Guide for Planning School Plants. East Lansing, Mich.:  
National Council on Schoolhouse Construction, 1958.  
284 pp.

Handler, B. Economic Planning for Better Schools. Ann  
Arbor, Mich.: University of Michigan, Department  
of Architecture, 1960. 110 pp.

\*Budgets; \*Educational Planning; \*School Expansion;  
\*School Planning; Architecture; Child Development;  
Classroom Environment; Planning

Harmon, Darell B. "Principles and Philosophy of the Co-  
ordinated Classroom," The Nation's Schools, 45 (March  
1950), 49-52.

\*Educational Environment; \*Environmental Concerns;  
\*Lighting Design; \*Physical Design Needs; \*Psychologi-  
cal Design Needs; Biological Influences; Biology;  
Classroom Design; Human Body; Human Engineering;  
Physics; Physiology; School Design; Task Performance;  
Vision

Healthful School Living. Washington, D.C.: National Educa-  
tion Association, American Medical Association, Joint  
Committee on Health Problems in Education, 1957.  
323 pp.

MacConnell, J. D. The Quest for Quality. Stanford, Calif.:  
School Planning Laboratory, Stanford University, 1964.

Manning, Peter (Ed.). "Primary School: An Environment  
for Education," Design, 230 (Feb. 1968), 60.

Mayer, F. W.; and C. V. Schmult. Case Study Presentations:  
Oakland Community College; The State University of  
New York; Clemson University. Ann Arbor, Michigan:  
The University of Michigan, Society for College and  
University Planning, 326 East Hoover Street, 1967.  
50 pp.

\*College Planning; \*Educational Environment; \*Envir-  
onmental Criteria; \*Facility Case Studies; \*Physical  
Environment; Campus Planning; Master Plans; Site  
Development; Universities

McDonald, E. G. "Effect of School Environment on Teacher and Student Performance," Air Conditioning, Heating, and Ventilating, 57 (1960), 78-79.

Morisseau, J. J. Seminar on Campus Planning. New York: Educational Facilities Laboratories, 1962. 8 pp.

\*Bibliographies; \*Building Design; \*Campus Planning; \*Higher Education; \*Master Planning; Classroom Environment; Educational Programs; Facility Utilization Research; Site Selection

Morphet, E. L.; and D. L. Jesser. Emerging, Design for Education. Englewood Cliffs, New Jersey: Citation Press, 1968. 240 pp.

"Playback--A Dialogue of a Schools' Design," Inland Architect, 12 (Oct. 1968), 4.

\*Adult Vocational Education; \*Building Innovation; \*School Design; \*School Environment; \*Technical Institutes; Acoustics; Air Conditioning; Campus Planning; Carpeting; Carrels; Classroom Furniture; Environmental Influence

Smith, Neill. Wurster Hall--The Campus Rebel. New York: Reinhold Publishing Company, 430 Park Ave., 1966. 5 pp.

\*Architectural Elements; \*Colleges; \*Educational Environment; \*School Design; Classroom Design; Flexible Facilities; Psychology; Space Utilization

Tanner, J. M. Education and Physical Growth. London, England: University of London Press, 1961. 144 pp.

Taylor, James L. School Sites: Selection, Development and Utilization. Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, U.S. Government Printing Office, 1950. (Special Publication No. 7).

Trends in School Planning. Stanford, Calif.: School of Education, Stanford University, 1955.

Wakefield, Howard E.; and Stewart D. North. The Design, Development, and Administration of Educational Facilities; A Conceptual Framework. Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-\$0.25, HC-\$1.35, ED 029 463. 1969. 25 pp.

\*Conceptual Schools; \*Design; \*Educational Administration; \*Educational Specifications; \*Environment; Information Processing; Models; Taxonomy

Wilson, W. O. Educational Specifications for St. Michaels School, Sante Fe, New Mexico. Sante Fe, New Mexico: New Mexico University, College of Education. 98 pp.

\*Curriculum; \*Dining Facilities; \*Educational Specifications; \*Environment; \*Facility; Classroom Environment; Equipment; Population Growth; Space Relationships



ENVIRONMENTAL INFLUENCES UPON  
LEARNING AND EDUCATION

This section is concerned with mans response to the physical environment, and in particular with how the components of the environment affect growth, behavior, psychological equilibrium and performance. Included are abstracts on color, thermal, visual and acoustical influences.

Bibliography of Environmental Design References. Madison, Wisc.: Wisconsin University, Environmental Design Center, Madison ERIC Clearinghouse on Educational Facilities, and/or Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-\$0.50, HC-\$2.56, ED 022 357. 1968. 62 pp.

\*Behavioral Sciences; \*Biological Sciences; \*Environmental Criteria; \*Environmental Influences; Architecture; Building Materials; City Planning; Color Planning; Design; Design Needs; Educational Facilities; Engineering; Housing; Human Engineering; Lighting; Perception; Physical Environment; Physiology; Psychological Studies; Sociology

Campbell, E. A. "Flooring--A Vital Environmental Element," American School Board Journal, 151 (Dec. 1965), 13-14.

\*Building Materials; \*Environmental Influences; \*Flooring; \*School Shops; Economics; School Maintenance

Danzig, Philip. "Educational Architecture," Science and Technology, (April 1969), 6-18.

\*Classroom Environment; \*Environmental Influences; \*School Architecture; \*School Design; \*Teaching Methods; Audiovisual Equipment; Building Materials; Learning; Lighting; Movable Classrooms; Thermal Environment

Environmental Health and the School Plant. Augusta, Georgia: Georgia Department of Education and Public Health, (Bulletin Eg. 65).

Glass, D. C. Conference on Environmental Influences on Behavior. New York: Rockefeller University Press and Russell Sage Foundation, 1968. 304 pp.

Hanlon, John J. Design for Health, the Teacher, the School and the Community. Philadelphia, Pa.: Lea and Febiger, 1963. 292 pp.

Kates, R. W. "Mans Response to the Physical Environment," Journal of Social Issues, 22 (Oct. 1966), 145 pp.

\*Environmental Influences; \*Environmental Research;  
\*Physical Environment; \*Psychological Needs; \*Social  
Environment; Abstracts; Acoustical Environment;  
Architectural Programing; Behavioral Sciences;  
Bibliography Citations; Stress Variables; Visual  
Environment

Larson, Cit. The Effect of Windowless Classrooms on  
Elementary School Children. Ann Arbor, Mich.:  
University of Michigan, 1965.

Legrand, Y. Light, Colour and Vision. London: Hunt,  
Hunt, Chapman, and Hall, 1968.

Roehr, L. A. Kimberly School with Electrical Space  
Conditioning. Cleveland, Ohio: General Electric,  
Large Lamp Department. 8 pp.

\*Classrooms; \*Environmental Influences; \*Exhasuting;  
\*High School Design; \*Lighting; Air Conditioning;  
Budgets; Building Equipment; Classroom Environment;  
Thermal Environment; Ventilating

Saunders, B. S. Environment and Growth. Pittsburgh,  
Penn.: Author, Consultant for the Graduate School  
of Public Health, University of Pittsburgh, 1934.  
375 pp.

Seliger, H. H. Physical and Biological Action. New York:  
Academic Press, Inc., 111 5th Ave., 1965. 417 pp.

Weston, H. C. Sight, Light, and Work. London: H. K. Lewis,  
1962. 283 pp.

\*Environmental Influences; \*Lighting; \*Performance  
Specifications; \*Vision; \*Visual Environment; Color;  
Environmental Research; Eyes; Glare; Human Engineering;  
Illumination Levels; Physiology; Safety; Solar  
Radiation; Task Performance

Wilson, C. C.; and E. A. Wilson. Healthful School Environment. Washington, D.C.: National Education Association of the United States, 1201 16th St. N.W., 1969. 298 pp.

\*Educational Environment; \*Environmental Influence; \*Health; \*Physical Health; \*School Environment; Acoustics; Building Design; Cleaning; Physical Environment; School Services; Thermal Environment

# COLOR

Birren, Faber. Color. Mc Graw - Hill Inc., 1969.  
4pp.

\*Color; \*Controlled Environment; \*Design Needs;  
\*Lighting; \*Visual Perception; Biological Influences;  
Biomedical Equipment; Building Design; Energy;  
Environmental Influences; Facility Improvement;  
Human Body; Illumination Levels; Light Physiology;  
Psychological Needs; Radiation; Sensory Deprivation;  
Solar Radiation; Utilities

Birren, Faber. "Psychological Implications of Color and  
Illumination," Illuminating Engineering, 64 (May 1969),  
397-402.

Bruce, G. V. Experience with Light and Color. New York,  
New York: American Book Co., 1951. 46 pp.

Color Planning for Hospitals and Schools. Chicago,  
Ill.: Mobil Finishes Co. Inc., and/or Bethesda,  
Maryland: ERIC Document Reproduction Service,  
National Cash Register Company, MF-\$0.25, HC-  
\$2.15, ED 020 623. 1962. 41 pp.

\*Building Design; \*Color Planning; \*Design Needs;  
\*Environmental Influence; \*School Planning; Illumination  
Levels; Physical Environment; Space Utilization;  
Visual Perception

Harmon, D. B.; and A. Renshaw. The Science of Decorating  
Schools. Washington, D. C.: Library of Congress,  
1957.

\*Classroom Design; \*Color; \*Environmental Influences;  
\*Human Posture; \*Lighting; Adaptation Level Theory;  
Costs; Educational Facilities; Human Engineering;  
Illumination; Learning; Perception; Performance  
Specifications; Space Relationships; Standards;  
Visual Discrimination; Visual Environment

Helson, H. A Review of Activities During the Year With  
Emphasis on the Relationship Between Colors and  
Lighting. New York, New York: Illuminating Engineering  
Research Institute, and/or Bethesda, Maryland:  
ERIC Document Reproduction Service, National Cash

Register Company, MF-\$0.25, HC-\$1.90, ED 021 433.  
1965. 36pp.

\*Color Planning; \*Lighting; \*Psychological Design  
Needs; \*Psychological Studies; \*Visual Stimuli

How Color can Create an Environment of Excellence in the  
Classroom, Grand Rapids, Michigan; American  
Seating Company, 1969. 12pp.

\*Classroom Environment; \*Color Planning; \*Environmental  
Influences; \*Psychological Design Needs; \*Visual  
Environment; Building Design; Illumination Levels;  
Physical Environment; School Planning; Visual Perception

Johnson, B. U. A Study of Color in the Classroom Environment.  
Knoxville, Tennessee: University of Tennessee, 1963.

Kohn, I. R. The Influence of Color and Illumination on the  
Interpretation of Emotions. Department of Psychology,  
University of Utah, and/or Bethesda Maryland: ERIC  
Document Reproduction Service; National Cash Register  
Company, MF-\$0.50, EF 003 946. 1968 117pp.

\*Color; \*Environmental Research; \*Illumination Levels;  
\*Response Mode; \*Visual Environment; Audition;  
Bibliographies; Controlled Environment; Graphs;  
Literature Reviews; Psychological Patterns; Research  
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